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and metabolic changes, which take place during the development of the disease, do not significantly and with specificity alter the color characteristics of the pathological tissue.

Please replace the paragraph beginning at page 15, line 31with the following re-written paragraph:

--For the clinical use of the methods of the invention, the different implementations of the image capturing module described above can be integrated to conventional optical imaging diagnostic devices. Such devices are the various medical microscopes, colposcopes and endoscopes, which are routinely used for the *in vivo* diagnostic inspection of tissues. Imaging of internal tissues of the human body requires in most cases the illumination and imaging rays to travel along the same optical path, through the cavities of the body. Due to this fact, in the common optical diagnostic devices the tissue's surface reflection contributes substantially in the formed image. This limits the imaging information for the subsurface characteristics, which are in general of great diagnostic importance. This problem becomes more serious especially in epithelial tissues such as the cervix, larynx, oral cavity etc, which are covered by fluids such as mucus and saliva. Surface reflection also obstructs the detection and the measurement of the alterations in the tissue's optical properties, provoked after the administration of agents which enhance the optical contrast between normal and pathologic tissue. More specifically, when a special agent alters selectively the scattering characteristics of the pathologic tissue, the strong surface reflection that takes place in both pathologic (agent responsive) and normal (agent non responsive) tissue areas, occludes the diagnostic signal that originates from the interaction of the agent with the subsurface features of the tissue. In other words, surface reflection constitutes optical noise in the diagnostic signal degrading substantially the perceived contrast between agent responsive and agent non responsive tissue areas.

Please replace the paragraph beginning at page 16, line 14 with the following re-written paragraph:

--Based on the above, the effective integration of the method to imaging diagnostic devices, requires embodiments of appropriate optics that ensure the elimination of the contribution of surface reflection to the captured image. Figure 4 illustrates a schematic diagram of a medical microscope consisted from a light source (LS), a magnification selection

A3

mechanism (MS), an eyepiece (EP) and a mount for attaching the image capturing module (CA), (detector(s), readout electronics etc). For the elimination of the surface reflection a pair of linear polarizers is employed. The incident to the tissue light (LS), is linearly polarized by passing though a linear polarizer (LPO). The surface reflected light (TS), has the same polarization plane with the incident to the tissue light (Fresnel reflection). By interposing the other linear polarizer to the optical path of the rays that are remitted from the tissue and form the optical image of the object, with its polarization plane perpendicular to the polarization level of the incident to the tissue light (IPO), the contribution of the surface reflection to the image of the object is eliminated. The light which is not surface-reflected enters the tissue, where due to multiple scattering, light polarization is randomized. Thus, a portion of the re-emitted light passes through the imaging polarization optics, carrying improved information for the subsurface features.--

Please replace the paragraph beginning at page 18, line 1 with the following re-written paragraph:

A4

--The diagnostic examination of non-directly accessible tissues, located in cavities of the human body (ear, cervix, oral cavity, esophagus, colon, stomach), is performed with the aid of common clinical microscopes. In these devices the illumination-imaging rays are near co-axial. More specifically, the line perpendicular to the exit point of light into the air, and the line perpendicular to the objective lens, form an angle of a few degrees. Due to this fact, these microscopes operate at a specific distance from the subject (working distance), in which the illuminated tissue area, coincides with the field-of-view of the imaging system. These microscopes are found to be inappropriate in cases where tissue imaging through human body cavities of small diameter and at short working distances, is required. These technical limitations are also constituting serious restricting factors for the successful clinical implementation of the method described herein. As it has been discussed above, elimination of surface reflection results in a substantial improvement of the diagnostic information, obtained from the quantitative assessment of marker-tissue interaction kinetics. If a common clinical microscope is employed as the optical imaging module, then due the above mentioned Illumination-imaging geometry, multiple reflections are occurring in the walls of the cavity, before the light reaches the tissue under analysis. In the case of colposcopy, multiple reflections are much more intense, since they are mainly taking place onto highly reflective blades of the speculum. Recall that the latter is inserted into the vagina to facilitate the inspection of cervix.--